

Abstracts

## Out of Town Meeting of the Ulster Paediatric Society, Saturday 13th May 2007

Vysehrad Hotel, Prague, Czech Republic.

### PROGRAMME:

- 11.00am Welcome – President: Dr Elaine Hicks
- 11.10am Invited Speaker: Prof Patrick Morrison, Consultant in Clinical Genetics, Belfast HSC Trust.
- 11.45am Spoken Presentations
- 12.30pm Poster Discussion
- 12.40pm Annual General Meeting
- 13.00pm Close

### PRESENTED ABSTRACTS

#### 1. Going to Prague for the weekend? Don't forget your genes, shoes, sunglasses & dental floss.

Patrick J Morrison. Department of Medical Genetics, Belfast HSC Trust, Lisburn Road, Belfast, BT9 7AB, UK.

Advances in DNA testing have allowed analysis of very small quantities of DNA using forensic techniques. This talk will discuss how genetic testing has moved from paediatric chromosomal analysis for major trisomies and some syndromes, through single gene testing for hereditary breast and colon cancers, to intricate testing for paternity and forensic uses. The cases of James Desmond Lloyd and Duncan Turner will be used to illustrate how criminal convictions increasingly rely on DNA tests.

#### 2. Audit of the indications for and outcome of gastrostomy formation in children with feeding difficulties in Northern Ireland (2004-2006).

Miriam Johnston, Neonatal Unit, Royal Jubilee Maternity Hospital. Belfast HSC Trust, Grosvenor Road, Belfast BT12 6BA

**Objectives:** To determine the indications used for gastrostomy formation in children with feeding difficulties in Northern Ireland, including investigations prior to surgery, and to audit the post-operative complication rates and outcome for weight gain following gastrostomy formation.

**Standards / Guideline Measuring:** From published literature, standard indications for gastrostomy feeding include severe feeding difficulties compromising nutritional status, clinical signs of under-nutrition, dependence on nasogastric tube feeding >6weeks or prolonged feeding >3 hours per day. Investigations prior to insertion should include assessment of nutritional status, oral-motor assessment +/- videofluoroscopy, pH monitoring, and Barium swallow. Complication rates are quoted as 10-17% major and 30-82% minor. When weight gain is compared after gastrostomy formation, two-thirds of children show catch-up growth.

**Methods:** Literature search to identify standards; Identified 47 children with primary gastrostomy formation during 2004-2006

using existing database and theatre diary; Retrospective case note review of 34 children recording age at formation, diagnosis, indication, investigations, duration of nasogastric feeding, complications, weight gain. Weight for age SDS (z score) and centile calculated using Child Growth Foundation software to compare pre-operative weight (recorded when child admitted) and post-operative weight. Disadvantages of method: based on recorded data, diverse group of children, small sample, limited outcome data.

**Results:** The mean age at formation was 3.2 years. The most common diagnoses were cerebral palsy, genetic syndrome and neurodegenerative disorder. Indications for gastrostomy were unsafe swallow (47%) and oropharyngeal dysmotility / feeding difficulties (26%). Duration nasogastric feeding was >6 weeks 24 (77%), <6 weeks 7 (23%) (mean 13 months). Gastroesophageal reflux was present clinically in 23 (70%). A pH study was performed in 3 (13% of those who had clinical gastroesophageal reflux). A barium meal was done in 27 (84%) and an OGD in 24 (75%). Oral-motor assessment was carried out in only 65% of those indicated and 11 children then had videofluoroscopy. A Freka PEG was most frequently used and 6% had a fundoplication. Mean postoperative hospital stay was 6 days, but 48% stayed only 1-2 days. Complications occurred in 55% (12% major and 46% minor). The mean weight change postgastrostomy formation was + 0.25 SDS, with 50% showing catch-up growth and 23% continued growth.

**Recommendations:** In Northern Ireland, the most common indications for gastrostomy are unsafe swallow and feeding difficulties, in children with genetic syndromes and cerebral palsy. Nasogastric feeding is often used for prolonged periods prior to gastrostomy. GOR is frequently judged to be present but rarely confirmed by pH studies and an anti-reflux procedure is only performed in a minority. More children should receive an oral-motor assessment prior to gastrostomy. Gastrostomy formation involves a short hospital stay and rates of complications are similar to published data. Improvement in growth is demonstrated but is less than in other studies. Further research areas include other health outcomes and carer quality of life, role of multidisciplinary feeding clinic services and after-care for children with gastrostomies.

#### 3. Audit of Year 4 Referrals to Armagh Community Trust

Aoife McMorow, Paula McAlinden, Department of Paediatrics, Southern HSC Trust, 68 Lurgan Road, Portadown, BT63 5QQ.

**Introduction and Aims:** Planning educational support for children with additional needs should be done at an early stage, to ensure appropriate services are put in place before the child begins their school placement. Late referrals to community paediatricians can potentially delay these services being initiated.

We aimed to gather information relating to all children who were referred for initial assessment to community paediatrics in Armagh Community Trust in the year prior to entry to primary one class in September 2006.

**Results:** There were 49 children in total referred to the community paediatric team in Armagh for assessment in the year preceding their entry to primary one. The most common means of referral was through speech and language therapy (23 children – 46.9%). A significant number were referred by their health visitor (18 children – 36.7%). 28 children (57.1%) had ongoing speech and language therapy at time of referral. 13 children (26.5%) had no regular input from health professionals. The largest group of children (19 children – 39.6%) was referred between the age of 3 years and 5 months and 3 years and 7 months of age. In total 36 children (75%) were seen within 12 weeks of referral. Following initial assessment, 40 children (83.3%) had a follow-up community paediatric review made. The most frequent onward referral made was to educational psychology (27 children – 56.3%). 17 children (35.4%) did not require further input from other professionals. A significant percentage of children required a statement of special educational needs (19 children – 39.6%). Overall, 41 children (85.4%) were placed in mainstream primary school, with or without assistance. 1 child was placed in a speech and language unit, and a further child in an ASD unit. 2 children were assessed to require special school. In total, 13 children were referred who were not previously known to any health professionals. Of these children 5 required a statement of special educational needs. 27 children (56.3%) had speech and language delay as their main diagnosis. In one child no significant problem was identified.

**Conclusions:** Health visitors and speech and language therapists are an important means of identifying children to community paediatric services. This is reflected in the high number of children with speech and language delay in this group. Despite the late timing of referrals, ¾ of children were assessed within 12 weeks, ensuring their needs for school could be expedited as soon as possible. A significant percentage (38%) of children who had no ongoing contact with any health professional needed a statement of special educational needs, reinforcing the importance of early referral. Community paediatricians continue to work closely with therapists and other professionals in order to optimize education for all children.

#### 4. The prevalence of childhood obesity in our insulin dependant diabetics and the correlation to metabolic control.

Thomas Bourke, Cameron Imrie, Murray Quinn. Department of Paediatrics, Western HSC Trust, Glenshane Road, Londonderry, BT47 6SB, UK.

**Aim:** We wished to establish if the increase in childhood obesity reported in Northern Ireland was reflected in our patients with insulin dependant diabetes mellitus (IDDM).

**Methods:** All patients with IDDM attending our service were identified. A retrospective chart review was carried out and patient's height, weight and HbA1c were recorded from their most recent annual review. Body mass index (BMI) was calculated and compared to current UK centile charts and international obesity task force definitions for overweight and obesity (Cole et al, BMJ 2000). The prevalence of overweight/obesity in our population was identified from the literature (Watkins *et al*, IJO 2005).

**Results:** 60 patients (26 male, 34 female) were included in the study. 33.3% of patients were overweight or obese (30.7% of males, 40% of females) compared to a population prevalence of 19.6% ( $p < 0.013$ ). 1.6% of patients were obese (0% of males,

3.3% of females) compared to a population prevalence of 4.3% (ns). BMI was skewed towards the higher centiles with 81% of males and 77% of females plotting above the 50<sup>th</sup> centile. The mean HbA1c was similar in the overweight/obese group compared to the non overweight/obese group (8.9% V's 8.6%,  $p = 0.29$ )

**Conclusion:** Our patients with IDDM are heavier than the general population. The prevalence of being overweight is significantly higher and the prevalence of obesity is similar to that reported in our population. These results differ from other studies which reported male BMI distributions similar to the non-diabetic population. There is no significant correlation between overweight/obesity and metabolic control. As all our patients with IDDM receive regular dietetic review it is clear that further strategies are required to manage this problem.

#### POSTER PRESENTATION

##### Are the current guidelines in Craigavon Area Hospital for the management of fever being adhered to?

Lesley Ann Funston, M McFarland, M Smith. Department of Paediatrics, Southern HSC Trust, 68 Lurgan Road, Portadown, BT63 5QQ.

**Background:** Fever is one of the commonest symptoms of disease in childhood and 'fever phobia' leads to much anxiety and fear on the part of parents and, sometimes, doctors. Guidelines exist in Craigavon Area Hospital for the management of fever, defined as an axillary temperature  $>37.5^{\circ}\text{C}$ . These guidelines require a decision as to whether a child is 'sick' or 'not sick' depending on admission and clinical observations. This audit aimed to find out whether these guidelines were being followed, with emphasis on identification of 'sick' children, antipyretic use and documentation of fever advice to carers.

**Methods:** A retrospective chart review of the management of fifty paediatric admissions during October 2006 (selected at random) with an axillary temperature  $>37.5^{\circ}\text{C}$  documented on admission was carried out.

**Results:** 14% of admissions were 0-3 months old, 48% 3-36 months, 38%  $>36$  months. 72% were identified as 'sick', 28% 'not sick'. Pulse, oxygen saturations and temperature were recorded in 100% of cases, respiratory rate 80%, blood pressure 16%, capillary refill time 62%, Glasgow Coma Score 64%. With regard to investigations, 61% 'sick' and 79% 'not sick' had urinalysis, 69% 'sick' and 79% 'not sick' had white cell count, 47% 'sick' and 57% 'not sick' had blood cultures. Blood glucose was documented in 6% of cases. A cause of infection was suggested in 94% of cases in 'sick' group (68% viral illness / URTI, 21% LRTI, 9% UTI, 3% gastro) and 86% of cases in 'not sick' group (58% viral illness / URTI, 8% LRTI, 8% UTI, 8% gastro, 17% other). Antibiotics were given to 47% 'sick' group and 64% 'not sick' group. Fever advice was documented in 8% of cases.

**Conclusions:** There is poor discrimination between 'sick' and 'not sick' children with the current guidelines. 'Not sick' children are receiving more investigations and antibiotics than those who are 'sick'. Capillary refill time and Glasgow Coma Score are poorly documented. Blood sugars are often not checked. A significant number of children receive both paracetamol and ibuprofen, despite current advice to the contrary. Fever advice is poorly documented. A new clinical pathway and educational programme, followed by re-audit, may address some of the gaps in the clinical care of these children.